



Purpose: This *Operation and Maintenance Plan* is incorporated into the National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) Permit and made an enforceable part of the permit and submitted to the Minnesota Pollution Control Agency (MCPA).

Facility name: _____ Feedlot registration no.: _____

Owner/Operator name: _____ Feedlot permit no.: _____

Liquid Manure Storage Area(s) and Manure Contaminated Runoff Containment Structure(s)

In addition to the Operation and Maintenance (O&M) procedures outlined in the plans and specifications developed for the Liquid Manure Storage Area(s) (LMSA) and/or Manure Contaminated Runoff Containment Structure(s) (MCRCS), the practices identified in the following chart will be employed.

LMSA(s) and/or MCRCS(s) at the facility (list site sketch ID number(s) below) (Group structures with similar O&M practices)	Storage capacity	Design freeboard*	Required O&M (from list below)	Additional O&M practices (choose from list below) (numbers 17 - 24)
<input type="checkbox"/> Underfloor LMSA (Deep Pit)	(months/days)	(feet)	(required by permit)	(no specific requirements)
List Sketch ID #(s):			1 – 16	
List Sketch ID #(s):			1 – 16	
<input type="checkbox"/> Outdoor LMSA (basin, tank, etc.)	(months/days)	(feet)	(required by permit)	(no specific requirements)
List Sketch ID #(s):			1 – 16	
List Sketch ID #(s):			1 – 16	
List Sketch ID #(s):			1 – 16	
<input type="checkbox"/> Runoff Containment Structure	(months/storm event)	(feet)	(required by permit)	(no specific requirements)
List Sketch ID #(s):			1 – 16	
List Sketch ID #(s):			1 – 16	

* Freeboard is the volume of a basin only available for use in emergency situations (typically the top one foot of depth). If the depth listed here does not coincide with the design plans and specifications, the correct freeboard will be that which is listed in the design plans and specifications.

Activities required by permit conditions (for those items/structures present at or applicable to the facility)

1. Perform weekly visual inspection of stormwater diversion devices.
2. Perform weekly visual inspections of runoff control structures.
3. Perform weekly visual inspections of devices channeling manure-contaminated runoff to the storage area.
4. Perform weekly visual inspections of all LMSAs/MCRCSs.
5. Perform weekly reading of depth marker level for all LMSAs/MCRCSs collecting precipitation.
6. Maintain design freeboard and operating levels in LMSAs/MCRCSs.
7. Perform monthly examination of the monitoring port or drain tile outlet for water flow and signs of discoloration or odor.
8. Maintain volume in LMSAs/MCRCSs to avoid the need for winter application of manure and be consistent with the manure management plan (MMP).
9. Repair sloughing or settling of earthen embankments (most repairs to liner material need plans and specs from a P.E.).
10. Repair of damage to concrete, lumber, steel, or other construction material used.
11. Divert surface water flow away from and prevent pooling near liquid manure storage areas.
12. Inspect manure handling equipment including hoses and couplings for pump-out periodically for leaks.
13. Routine maintenance of equipment such as valves and pumps
14. Use automatic shut-off devices on continuous pumping equipment.
15. Do not allow the LMSAs/MCRCSs to discharge (unless allowed/exempt by permit conditions).
16. Maintain a fence around at grade or near-grade LMSAs.

Additional facility design, maintenance, and operational practices

(No specific items are required in this section, unless incorporated into the design plans and specifications for the structure.)

17. Use access pads for pump-out equipment to prevent erosion.
18. Use anti-scour practices at pipe outlets to prevent liner damage.
19. Removal of built-up solids from separation screens.
20. Control vegetation around LMSAs by frequent mowing or other practices.
21. Maintain appropriate design volume in LMSAs by controlling sludge build-up.
22. Cleaning out of transfer pipes to prevent sludge build up.
23. Other: _____
24. Other: _____

Solid Manure Storage Areas

In addition to the Operation and Maintenance (O&M) procedures outlined in the plans and specifications developed for the Solid Manure Storage Area(s) the practices identified in the following chart will be employed.

Solid manure storage areas at the facility (list site sketch ID number(s) below) (Group structures with similar O&M practices)	Storage capacity	Quantity stored	Required O&M (from list below)	Additional O&M practices (choose from list below) (numbers 10 - 13)
<input type="checkbox"/> Stockpile (on-site)	(months/days)	(tons)	(required by permit)	(no specific requirements)
List Sketch ID #(s):			1 – 8	
List Sketch ID #(s):			1 – 8	
<input type="checkbox"/> Manure pack or litter	(months/days)	(tons)	(required by permit)	(no specific requirements)
List Sketch ID #(s):			1 – 8	
List Sketch ID #(s):			1 – 8	
<input type="checkbox"/> Underfloor Storage	(months/days)	(tons)	(required by permit)	(no specific requirements)
List Sketch ID #(s):			1 – 8	
List Sketch ID #(s):			1 – 8	
<input type="checkbox"/> Manure Compost	(months/days)	(tons)	(required by permit)	(no specific requirements)
List Sketch ID #(s):			1 – 9	

Activities required by permit conditions (for those items/structures present at or applicable to the facility)

1. Perform weekly visual inspection of stormwater diversion devices
2. Perform weekly visual inspections of runoff control structure:
3. Perform weekly visual inspections of devices channeling manure-contaminated runoff to the manure storage or containment structure
4. Inspect manure hauling equipment periodically for leaks
5. Divert surface water flow away from and prevent pooling near solid manure storage areas
6. Repair of damage to permanent stockpile/storage pad (if a permanent stockpile/storage pad is required)
7. Repair of damage to concrete, lumber, steel, or other construction material used
8. Removal of all manure temporarily placed outside of barn/lot during cleanout process within ten days (no more than six times per year)
9. Operate the compost site in accordance with Minn. R. 7020.2150 (manure compost sites **only**)

Additional facility design, maintenance, and operational practices

(No specific items are required in this section, unless incorporated into the design plans and specifications for the structure.)

10. Routine maintenance of manure handling equipment
11. Removal of built-up solids from separation screens
12. Other: _____
13. Other: _____

General Facility Operations

Initial here: _____,

by initialing here I indicate that I have read, understand, and agree to the requirements/procedures outlined below. (Initial is required for all facilities using this form.)

- A daily inspection of all water lines, including drinking water or cooling water lines (an equivalent method that incorporates the use of water meters, pressure gages or other monitoring devices is also acceptable)
- Disposal of solid and hazardous waste will be done in accordance with applicable Minnesota Rules
- Animals shall not be allowed to come into contact with waters of the state (except animals on pasture)
- Records of operation and maintenance activities will be kept in accordance with the facility's NPDES/SDS Permit
- Manure storage areas shall be managed and subsequent land application of manure shall be performed in accordance with the approved MMP for the facility.
- For those sites that are required by the MPCA to perform groundwater monitoring, the facility agrees to incorporate the MPCA approved groundwater monitoring plan and/or requirements from the facility's NPDES/SDS Permit into this Operations and Maintenance Plan.

Ancillary Area Stormwater Management

In addition to the Operation and Maintenance (O&M) procedures outlined in the Stormwater Pollution Prevention Plan (SWPPP) developed for the facility (if required) the practices identified in the following chart will be employed to manage stormwater discharges from ancillary areas not included in the definition of the feedlot facility.

Potential Pollutant Transport Areas (not included in the definition of the feedlot facility)	O&M Practices (choose at least one practice from the list below)
<input type="checkbox"/> Access Roads or Parking Areas used for Transporting Materials To/From Facility	
<input type="checkbox"/> Non-Manure Materials Handling Areas (Fertilizer/Pesticide Storage, Bulk Oil/Gasoline Storage, Dry Bale/Bedding Storage, Milk/Egg Storage, Etc.)	
<input type="checkbox"/> Garbage/Trash Disposal Sites	
<input type="checkbox"/> Equipment Storage and Maintenance Sites	
<input type="checkbox"/> Shipping and Receiving Areas	
<input type="checkbox"/> Truck/Equipment Wash Areas	
<input type="checkbox"/> Other:	
<input type="checkbox"/> Other:	
<input type="checkbox"/> Other:	

Potential Erosion or Sediment Transport Areas (not included in the definition of the feedlot facility)	O&M Practices (choose at least one practice from the list below)
<input type="checkbox"/> Access Roads or Parking Areas	
<input type="checkbox"/> Roof Water Runoff	
<input type="checkbox"/> Yard Water Runoff	
<input type="checkbox"/> "Clean-Water" Tile Intakes	
<input type="checkbox"/> Permanent Stormwater Management Structure Discharge (outlet of stormwater basin, etc)	
<input type="checkbox"/> Other:	
<input type="checkbox"/> Other:	
<input type="checkbox"/> Other:	

Activities for pollutant transport areas

- Ancillary area has roof/cover to prevent stormwater mingling with pollutants.
- Divert surface water flow away from and prevent pooling near ancillary areas.
- Maintain stormwater diversion devices.
- Perform visual inspections of runoff diversion devices.
- Repair of damage to concrete, lumber, steel, or other construction material used.
- Maintain grass buffers/grass waterways at discharge point
- Handled/Moved off-site.
- Maintain site cleanliness.
- Other: _____
- Other: _____
- Other: _____

Activities for erosion or sediment transport areas

- Provide energy dissipation at the end of channelized flow or pipe/gutter, such as rip-rap.
- Maintain gravel/rock where roof water falls onto soil.
- Maintain grass buffers/grass waterways at discharge point.
- Maintain grass buffer around tile intakes.
- Maintain grass buffers at the edge of roads/parking areas.
- Keep vegetative cover where possible.
- Repair rills that develop to minimize scour of sediment.
- Maintain stormwater diversion devices.
- Perform visual inspections of erosion prevention measures.
- Maintain site cleanliness.
- Other: _____
- Other: _____
- Other: _____